

IN THE CLAIMS:

1.-14. (Canceled)

15. (Currently Amended) A method of forming a circuit feature on a plurality of substrates in a semiconductor production line, the method comprising:
preparing said substrates for receiving a resist mask corresponding to said circuit feature;
establishing an exposure map for a step and repeat exposure of said substrates;
updating said exposure map for a plurality of specified locations on a specified one of said substrates on the basis of:
inline measurement data obtained from one or more of said substrates, wherein at least a portion of said inline measurement data is obtained from substrates prior to exposure and from substrates after exposure; and
electrical measurement data related to said circuit feature after said circuit feature is completed;
exposing said specified substrate with said updated exposure map to form said resist mask; and
performing a manufacturing sequence to form said circuit feature by using said resist mask.

16.-19. (Canceled)

20. (Original) A method of controlling a multi-step exposure of substrates during the formation of a circuit feature, the method comprising:

obtaining pre-exposure measurement data related to a predefined location on a substrate to be exposed;

adjusting at least one exposure parameter for said predefined location on the basis of said pre-exposure measurement data; and

exposing a substrate at said predefined location with the adjusted at least one exposure parameter.

21. (Original) The method of claim 20, further comprising obtaining measurement data related to said circuit feature after said circuit feature is completed and adjusting said at least one exposure parameter on the basis of the measurement data related to said completed circuit feature.

22. (Original) The method of claim 20, further comprising obtaining post-exposure measurement data of substrates after exposure and adjusting said at least one exposure parameter on the basis of said post-exposure measurement data.

23.-25. (Canceled)

26. (Currently Amended) An advanced exposure tool control system, comprising:
a control unit operatively connectable to an exposure tool and configured to adjust at least
one exposure parameter of said exposure tool, said control unit being further
configured to:
receive information about an inline parameter indicative of a characteristic of a
predefined location on a substrate plurality of substrates, said information
comprising:
inline measurement data obtained from one or more of said substrates,
wherein at least a portion of said inline measurement data is
obtained from substrates prior to exposure and from substrates
after exposure; and
electrical measurement data related to a circuit feature on one of said
substrates after said circuit feature is completed; and
update said at least one exposure parameter for said predefined location on the
basis of said information.